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PATENT APPLICATION
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UNITED STATES PATENT APPLICATION

of

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for

VERIFICATION OF SERVER AUTHORIZATION TO PROVIDE NETWORK RESOURCES

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BACKGROUND OF THE INVENTION

1. Related Applications

This application is a continuation of U.S. Patent Application Serial No. 09/270,362, filed March 16, 1999, entitled, "Verification of Server Authorization to Provide Network Resources," now U.S. Patent No. 6,304,969, issued on October 16, 1999, which is hereby incorporated by reference.

2. The Field of the Invention

The present invention relates to systems and methods for verifying the authorization of a server to provide network resources to a client. More specifically, the present invention relates to systems and methods whereby the client compares a random number encrypted in a message sent to the server with a random number encrypted in a message sent to the client from the server, wherein the client determines that the server is authorized if the random numbers are the same.

3. The Prior State of the Art

During recent years, the use of computer networks to distribute information to users has increased dramatically. For example, the Internet is currently used for many purposes, including electronic commerce, delivery of news, entertainment, and education, to name just a few. Many Internet service providers ("ISPs") and content providers have found that accurate identification of users is necessary to support subscription services. When a client establishes communication with an ISP, the server at the ISP typically verifies that the client is recognized as one that has duly subscribed to the Internet service. Likewise, many World Wide Web ("Web") sites are available to users by subscription only. When a client attempts to access a subscription-based Web site, the client may be prompted to verify that it is authorized to receive content from the site.

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Verification of the identity of clients has been accomplished in many ways. A simple example involves the client transmitting to the server a user name and a password that has been previously registered with the server. If the user name and password match a registered user name and password stored at the server, the client is allowed access to the network resources. More advanced security systems include, for example, transmitting a client machine identifier from the client to the server or other techniques whereby information associated with the client verifies the identity of the client.

Verifying the identity and authorization status of clients allows ISPs and content providers to collect subscription fees from users. Without a reliable system to verify authorization of clients, non-authorized users could access service, and legitimate users may have little incentive to pay for service.

There are some network configurations and business models that require security measures beyond the typical client-identification strategies described above. In some instances, it is desirable to identify the authorization of the server to provide network resources to the client. For a variety of reasons, suppliers or manufacturers of certain client systems may desire to allow only selected servers to provide network resources to their client systems. In one example, a provider of enhanced Internet, television, or other information or entertainment services may develop a client system specifically designed to receive its information or entertainment resources. In this example, the supplier of the client system can be seen primarily as the provider of the information or entertainment services, while the client system can be seen as a tool allowing users to gain access to the provider.

The traditional security strategy of providing user names, passwords, or other identifiers is inadequate when applied to the verification of authorization of a server to provide network resources. As can be easily understood, simple identifiers are not readily

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